



665 Winter St. SE
Post Office Box 14001
Salem, Oregon 97309-5014

Name: GIFFEN, TODD MICHAEL	Study Date: 09/18/2008 09:15 AM	PT. #: 2904263
MRN: 2110284	Patient Location: OP	
DOB: 03/13/1985 (M/d/yyyy)	Gender: Male	Height: 74 in
Age: 23 yrs		Weight: 179 lb
Ordering Physician: Rosamund Irwin, MD		
Performed By: Pamela S. Halleen		
Reason For Study: Tachycardia		BSA: 2.1 meters ²
History: chest pain, dizziness, irreg. HB.		

M-Mode/2-D Measurements:

RVDd: 3.0 cm (< 4.0)	Ao root diam: 2.8 cm (< 4.0)	LA dimension: 2.9 cm (1.9-4.0)
IVSd: 0.89 cm (0.6-1.2)	LVPWd: 0.93 cm (0.6-1.1)	LVIDd: 4.9 cm (3.7-5.5)
IVSs: 1.2 cm	LVPWs: 1.6 cm	LVIDs: 3.5 cm (4.0)
EF (est.): 56 % (> 55%)	ACS: 1.8 cm (1.7-2.1)	

DOPPLER FINDINGS:

Ao V2 max: 93 cm/sec (100-170 cm/s)	MV V2 max: 67 cm/sec (60-130 cm/s)	PA V2 max: 69 cm/sec (60-90 cm/s)
TV V2 max: 89 cm/sec (30-70 cm/s)		

MMode/2D Measurements & Calculations

MV excursion: 2.5 cm

LVLs ap4: 6.2 cm

MV E-F slope: 20 cm/sec

Doppler Measurements & Calculations

MV max PG: 1.8 mmHg	Ao max PG: 3.5 mmHg	TV max PG: 3.2 mmHg	PA max PG: 1.9 mmHg
MV V2 mean: 45 cm/sec	Ao V2 mean: 63 cm/sec	TV V2 mean: 45 cm/sec	PA V2 mean: 51 cm/sec
MV mean PG: 0.90 mmHg	Ao mean PG: 1.8 mmHg	TV mean PG: 0.95 mmHg	PA mean PG: 1.2 mmHg
MV V2 VTI: 12 cm	Ao V2 VTI: 15 cm		PA V2 VTI: 18 cm

TR max vel: 221 cm/sec

RAP systole: 5.0 mmHg

TR max PG: 20 mmHg

RVSP(TR): 25 mmHg

Left Ventricle

The left ventricle is normal in size. There is normal left ventricular wall thickness. Ejection Fraction = 55-60%.

Right Ventricle

The right ventricle is normal size.

Atria

The left atrial size is normal. Right atrial size is normal. The IVC is normal in size and collapses with inspiration.

Mitral Valve

The mitral valve leaflets appear normal. There is no evidence of stenosis, fluttering, or prolapse. There is no mitral regurgitation noted.

Tricuspid Valve

The tricuspid valve is not well visualized, but is grossly normal. There is mild tricuspid regurgitation.

9/19/2008

ECHOCARDIOGRAM REPORT

Aortic Valve

The aortic valve is trileaflet. The aortic valve opens well. No aortic regurgitation is present.

Pulmonic Valve

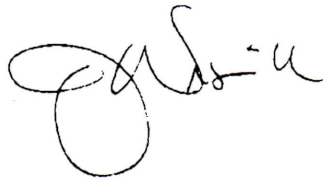
The pulmonic valve is not well seen, but is grossly normal. There is no pulmonic valvular regurgitation.

Pericardium/Pleural

There is no pericardial effusion.

Interpretation Summary

A two-dimensional transthoracic echocardiogram with M-mode and Doppler was performed. This was essentially a normal study. There is mild tricuspid regurgitation.



Reading Physician:

James E. Wasenmiller 09/18/2008 03:37 PM

MRN: 2110284

PHILIPS

SALEM HOSPITAL
665 Winter Street SE
Salem, OR 97301
(503)561-5678

PATIENT DEMOGRAPHICS

Last Name	GIFFEN	Physician	IRWIN
First Name	TODD	Scanned By	J. Stepman
Middle Initial	M	Reading Physician	
ID Number	2110284	Test Date	9/18/2008
Date Of Birth	03/13/1985	Analysis Date	9/19/2008
Sex	M	Hookup Time	9:40 AM
Source	OP	Recording Time	23 hr 59 min
Billing Code		Analysis Time	23 hr 59 min
Recorder Format	Digitrak Plus	Recorder Number	
Reason for Test	TACHYCARDIA	Comments	
Medications			

Heart Rate Data

Total Beats : 46190
Min HR : 76 BPM at 10:44:47 AM
Avg HR : 106 BPM
Max HR : 150 BPM at 4:56:32 PM

Heart Rate Variability

ASDNN 5 : 41.3 msec
SDANN 5 : 52.0 msec
SDNN : 67.8 msec

ST Episode Analysis

	Ch1	Ch2	Ch3
Min ST Level	-	-	-
Max ST Level	-	-	-
ST Episodes	-	-	-

Pacer Analysis

Single Paced Beats : -
Dual Paced Beats : -
Fusion Beats : -

Atrial Fibrillation

AFib Beats : 0 (0.0%)
AFib Duration : 0.0 min

Ventricular Ectopy

Total VE Beats : 0 (0.0%)
Vent Runs : 0
Beats : 0
Longest : 0
Fastest : 0 BPM
Triplets : 0 Events
Couplets : 0 Events
Single/Interp PVC : 0/0
R on T : 0
Single/Late VE's : 0/0
Bi/Trigeminy : 0/0 Beats

Supraventricular Ectopy

Total SVE Beats : 0 (0.0%)
Atrial Runs : 0
Beats : 0
Longest : 0
Fastest : 0 BPM
Atrial Pairs : 0 Events
Drop/Late : 0/0
Longest N-N : 0.9 sec at 12:22:09 PM
Single PAC's : 0
Bi/Trigeminy : 0/0 Beats

INTERPRETATION

sinus tach

439787

Kle

K. W.

9/22/08

Signed :

Date :

Narrative Summary

Monitoring started at 9:40 AM and continued for 23 hr 59 min. The average heart rate was 106 BPM. The minimum heart rate was 76 BPM, occurring at 10:44:47 AM. The maximum heart rate was 150 BPM, occurring at 4:56:32 PM.

The patient's rhythm included 3 hr 17 min 34 sec of tachycardia. The fastest single episode of tachycardia occurred at 4:52:28 PM, lasting 5 min 6 sec, with maximum heart rate of 150 BPM.

SUPRAVENTRICULAR EVENTS

Supraventricular Ectopic Profile

Time Ending	HR Min	HR Avg	HR Max	S.P. Total	MK Max	HR Max	Pace									
Service																
10:00 AM	86	109	133	0	0.7	0.7	0	0	0	0	0	00:00	0	0	0	0
11:00 AM	76	94	129	0	0.9	0.9	0	0	0	0	0	00:00	0	0	0	0
12:00 PM	78	107	145	0	0.8	0.8	0	0	0	0	0	00:00	0	0	0	0
1:00 PM	77	109	145	0	0.9	0.9	0	0	0	0	0	00:00	0	0	0	0
2:00 PM	92	115	145	0	0.7	0.7	0	0	0	0	0	00:00	0	0	0	0
3:00 PM	82	98	133	0	0.8	0.8	0	0	0	0	0	00:00	0	0	0	0
4:00 PM	82	108	138	0	0.8	0.8	0	0	0	0	0	00:00	0	0	0	0
5:00 PM	88	106	150	0	0.7	0.7	0	0	0	0	0	00:00	0	0	0	0
6:00 PM	-	91	-	0	0.0	0.0	0	0	0	0	0	00:00	0	0	0	0
7:00 PM	-	-	-	0	0.0	0.0	0	0	0	0	0	00:00	0	0	0	0
8:00 PM	-	-	-	0	0.0	0.0	0	0	0	0	0	00:00	0	0	0	0
9:00 PM	-	-	-	0	0.0	0.0	0	0	0	0	0	00:00	0	0	0	0
10:00 PM	-	-	-	0	0.0	0.0	0	0	0	0	0	00:00	0	0	0	0
11:00 PM	-	-	-	0	0.0	0.0	0	0	0	0	0	00:00	0	0	0	0
12:00 AM	-	-	-	0	0.0	0.0	0	0	0	0	0	00:00	0	0	0	0
1:00 AM	-	-	-	0	0.0	0.0	0	0	0	0	0	00:00	0	0	0	0
2:00 AM	-	-	-	0	0.0	0.0	0	0	0	0	0	00:00	0	0	0	0
3:00 AM	-	-	-	0	0.0	0.0	0	0	0	0	0	00:00	0	0	0	0
4:00 AM	-	-	-	0	0.0	0.0	0	0	0	0	0	00:00	0	0	0	0
5:00 AM	-	-	-	0	0.0	0.0	0	0	0	0	0	00:00	0	0	0	0
6:00 AM	-	-	-	0	0.0	0.0	0	0	0	0	0	00:00	0	0	0	0
7:00 AM	-	-	-	0	0.0	0.0	0	0	0	0	0	00:00	0	0	0	0
8:00 AM	-	-	-	0	0.0	0.0	0	0	0	0	0	00:00	0	0	0	0
9:00 AM	-	-	-	0	0.0	0.0	0	0	0	0	0	00:00	0	0	0	0
10:00 AM	-	-	-	0	0.0	0.0	0	0	0	0	0	00:00	0	0	0	0
Total	76	106	150	0	0.9	0.9	0	0	0	0	0	00:00	0	0	0	0

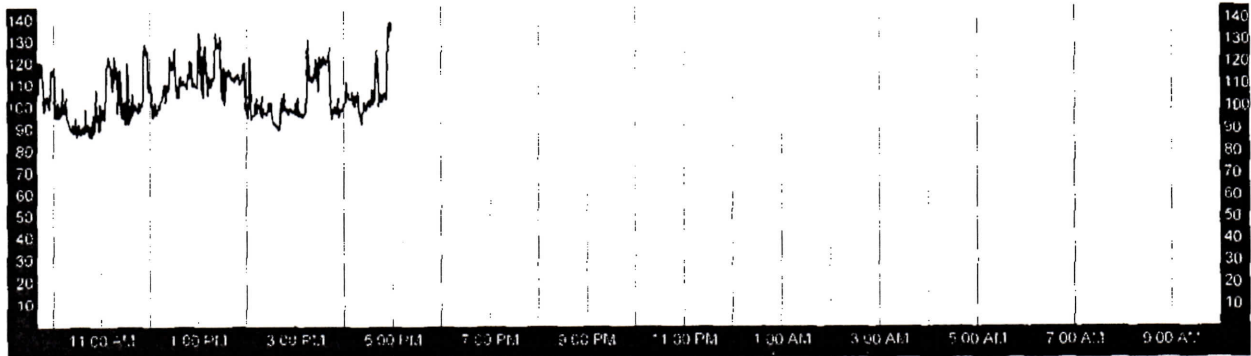
SUPRAVENTRICULAR EVENTS

			Atrial Runs				Brady		Tachy			
Time	Min	Sec	Min	Sec	Min	Sec	Min	Sec	Min	Sec	Min	Sec
10:00 AM	86	109	133	0	0	0	0	0	00:00	10	10:49	
11:00 AM	76	94	129	0	0	0	0	0	00:00	10	04:38	
12:00 PM	78	107	145	0	0	0	0	0	00:00	25	28:01	
1:00 PM	77	109	145	0	0	0	0	0	00:00	57	34:27	
2:00 PM	92	115	145	0	0	0	0	0	00:00	31	48:01	
3:00 PM	82	98	133	0	0	0	0	0	00:00	15	06:31	
4:00 PM	82	106	138	0	0	0	0	0	00:00	17	29:27	
5:00 PM	88	106	150	0	0	0	0	0	00:00	25	17:04	
6:00 PM	-	91	-	0	0	0	0	0	00:00	0	00:00	
7:00 PM	-	-	-	0	0	0	0	0	00:00	0	00:00	
8:00 PM	-	-	-	0	0	0	0	0	00:00	0	00:00	
9:00 PM	-	-	-	0	0	0	0	0	00:00	0	00:00	
10:00 PM	-	-	-	0	0	0	0	0	00:00	0	00:00	
11:00 PM	-	-	-	0	0	0	0	0	00:00	0	00:00	
12:00 AM	-	-	-	0	0	0	0	0	00:00	0	00:00	
1:00 AM	-	-	-	0	0	0	0	0	00:00	0	00:00	
2:00 AM	-	-	-	0	0	0	0	0	00:00	0	00:00	
3:00 AM	-	-	-	0	0	0	0	0	00:00	0	00:00	
4:00 AM	-	-	-	0	0	0	0	0	00:00	0	00:00	
5:00 AM	-	-	-	0	0	0	0	0	00:00	0	00:00	
6:00 AM	-	-	-	0	0	0	0	0	00:00	0	00:00	
7:00 AM	-	-	-	0	0	0	0	0	00:00	0	00:00	
8:00 AM	-	-	-	0	0	0	0	0	00:00	0	00:00	
9:00 AM	-	-	-	0	0	0	0	0	00:00	0	00:00	
10:00 AM	-	-	-	0	0	0	0	0	00:00	0	00:00	
Total	76	106	150	0	0	0	0	0	00:00	188	03:17:34	

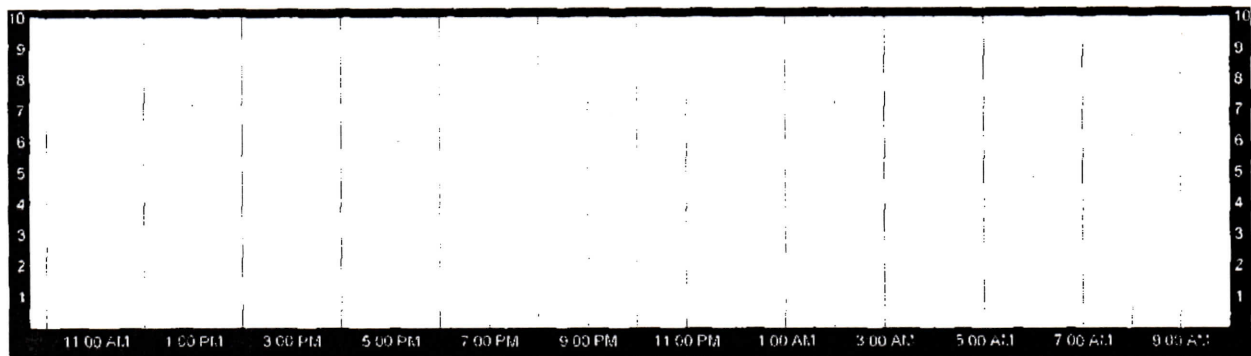
SUPRAVENTRICULAR EVENTS

Special Event Graphics

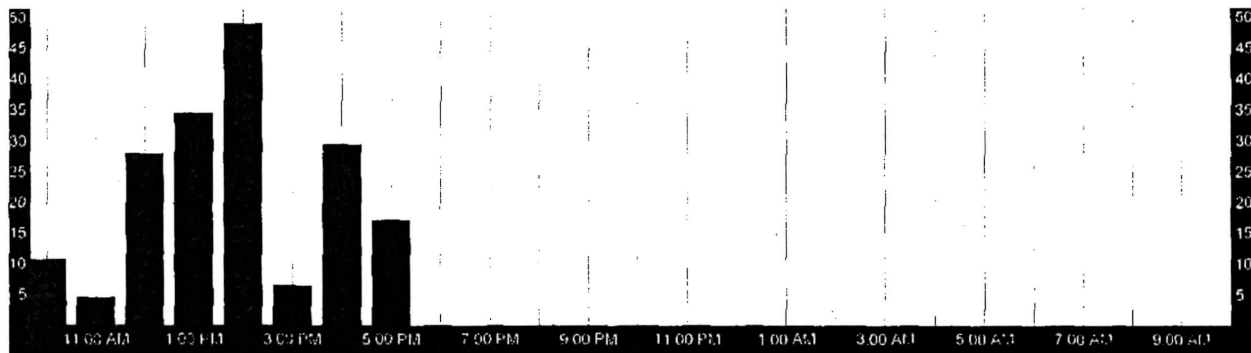
Heart Rate



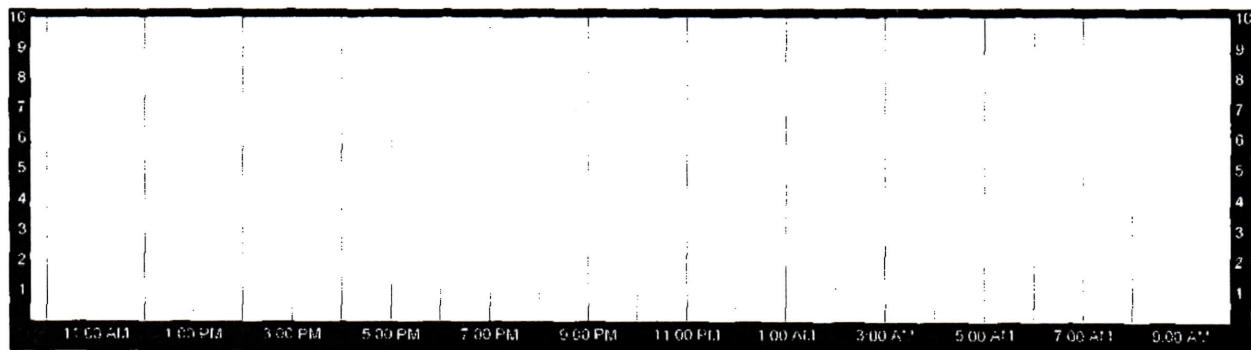
Premature Atrial Beats Per Interval



Minutes of Tachycardia Per Interval



Minutes of Bradycardia Per Interval



VENTRICULAR EVENTS

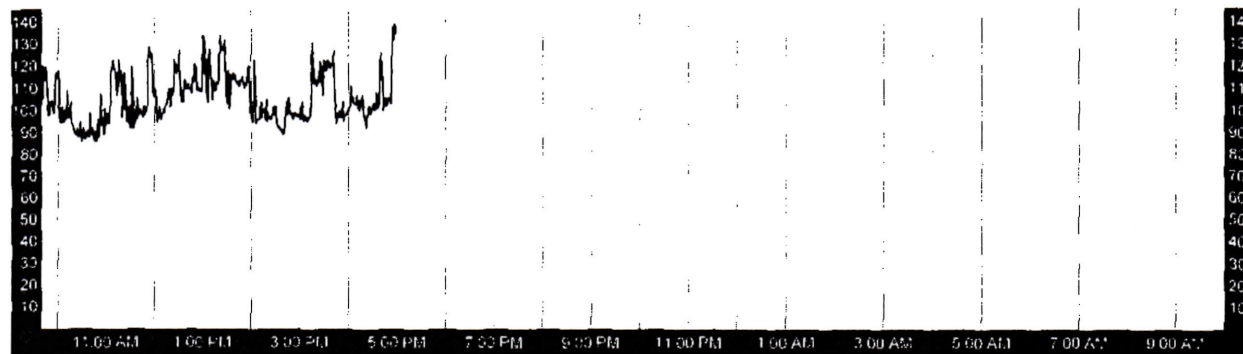
Ventricular Ectopic Profile

Time	HR	ECG	ECG	ECG	ECG	ECG	ECG	ECG	ECG	ECG	ECG	ECG	ECG	ECG	ECG	ECG	ECG	ECG
10:00 AM	86	109	133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	76	94	129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	78	107	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 PM	77	109	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 PM	92	115	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 PM	82	98	133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	82	108	138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	88	106	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 PM	-	91	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 AM	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	76	106	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

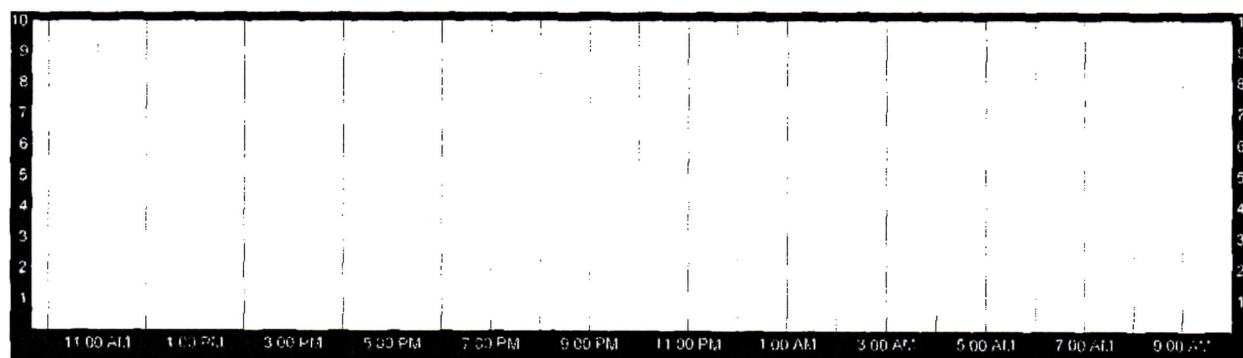
VENTRICULAR EVENTS

Special Event Graphics

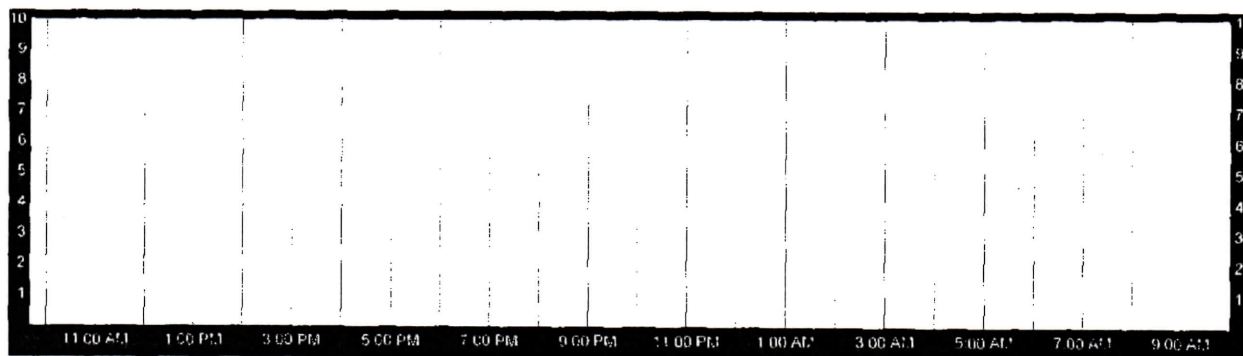
Heart Rate



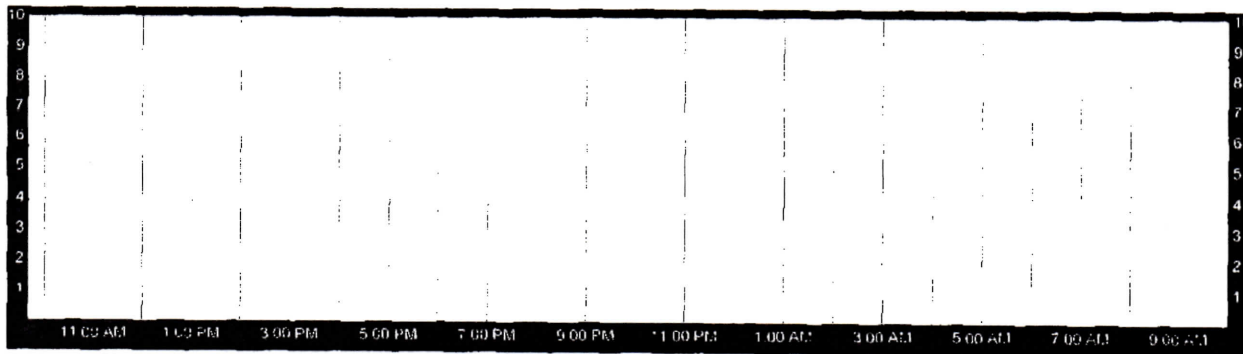
Ventricular Beats Per Interval



Ventricular Couplets Per Interval



Ventricular Bigeminy/Trigeminy Beats Per Interval



DIARY, STRIP & MORPHOLOGY INDEX**Diary Entry Index**

10:01 AM Patient Event

11:05 AM Patient Event

Morphology Index

9:40:06 AM

Primary Normal

46190 Beats

- BPM

Strip 1 of 1

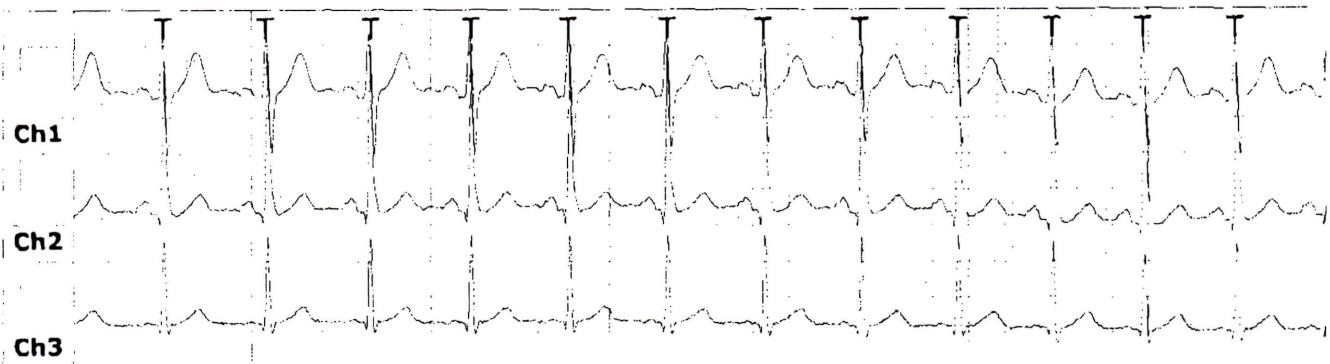
Strip Index

9:50:01 AM	14 BPM	Size x1,x1,x1	Tachy	Strip 1 of 12
10:38:57 AM	22 BPM	Size x1,x1,x1	Tachy	Strip 2 of 12
10:44:44 AM	76 BPM	Size x1,x1,x1	Min HR	Strip 3 of 12
11:11:45 AM	24 BPM	Size x1,x1,x1	Tachy	Strip 4 of 12
12:06:19 PM	15 BPM	Size x1,x1,x1	Tachy	Strip 5 of 12
12:22:06 PM	82 BPM	Size x1,x1,x1	Other	Strip 6 of 12
1:13:41 PM	10 BPM	Size x1,x1,x1	Tachy	Strip 7 of 12
2:31:52 PM	11 BPM	Size x1,x1,x1	Tachy	Strip 8 of 12
3:20:31 PM	19 BPM	Size x1,x1,x1	Tachy	Strip 9 of 12
4:12:10 PM	12 BPM	Size x1,x1,x1	Tachy	Strip 10 of 12
4:52:27 PM	45 BPM	Size x1,x1,x1	Tachy	Strip 11 of 12
4:56:28 PM	50 BPM	Size x1,x1,x1	Max HR	Strip 12 of 12

SELECTED STRIPS

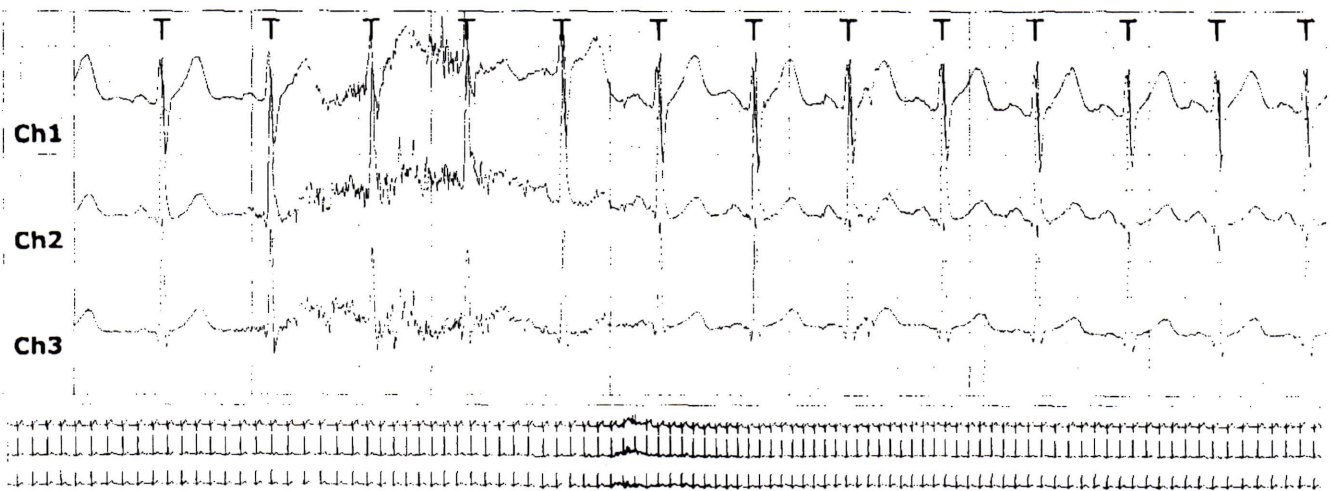
9:50:01 AM 114 BPM Size x1,x1,x1 Tachy

Strip 1 of 12



10:38:57 AM 122 BPM Size x1,x1,x1 Tachy

Strip 2 of 12



10:44:44 AM 76 BPM Size x1,x1,x1 Min HR

Strip 3 of 12



SELECTED STRIPS

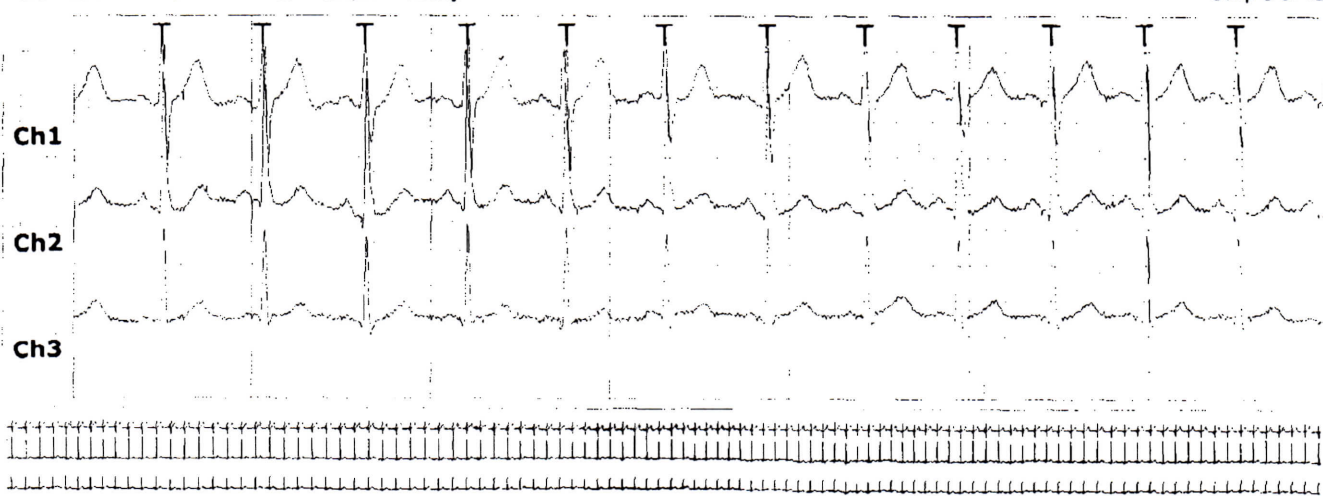
11:11:45 AM 124 BPM Size x1,x1,x1 Tachy

Strip 4 of 12



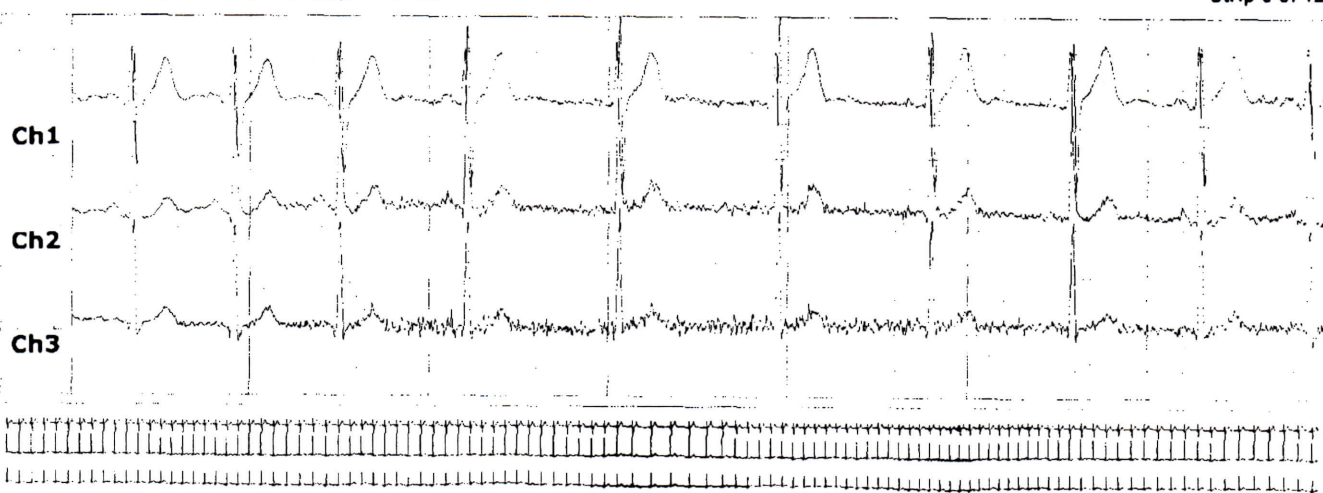
12:06:19 PM 115 BPM Size x1,x1,x1 Tachy

Strip 5 of 12



12:22:06 PM 82 BPM Size x1,x1,x1 Other

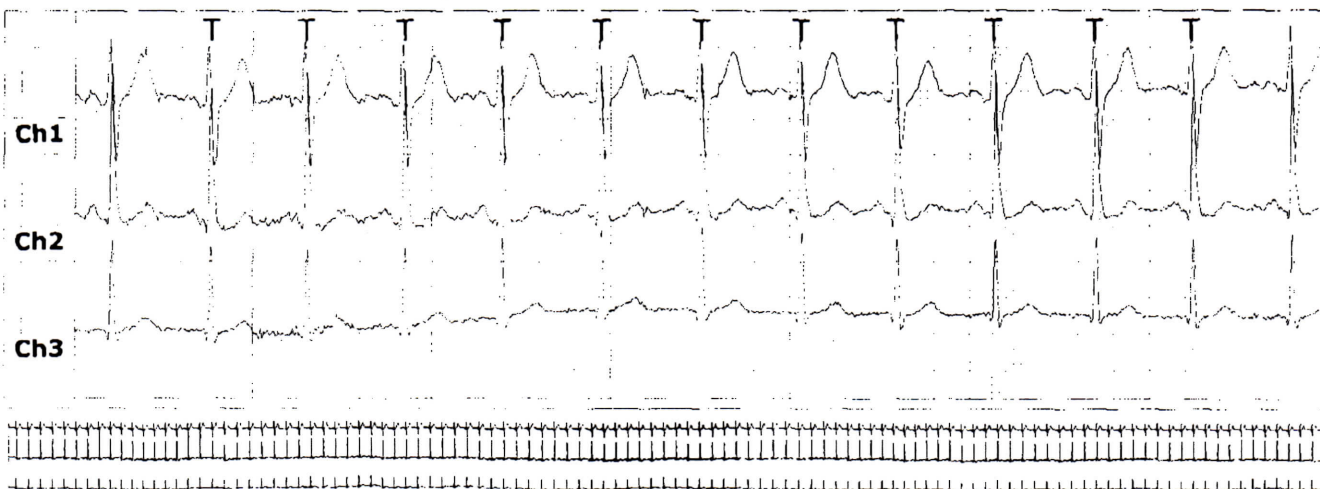
Strip 6 of 12



SELECTED STRIPS

1:13:41 PM 110 BPM Size x1,x1,x1 Tachy

Strip 7 of 12



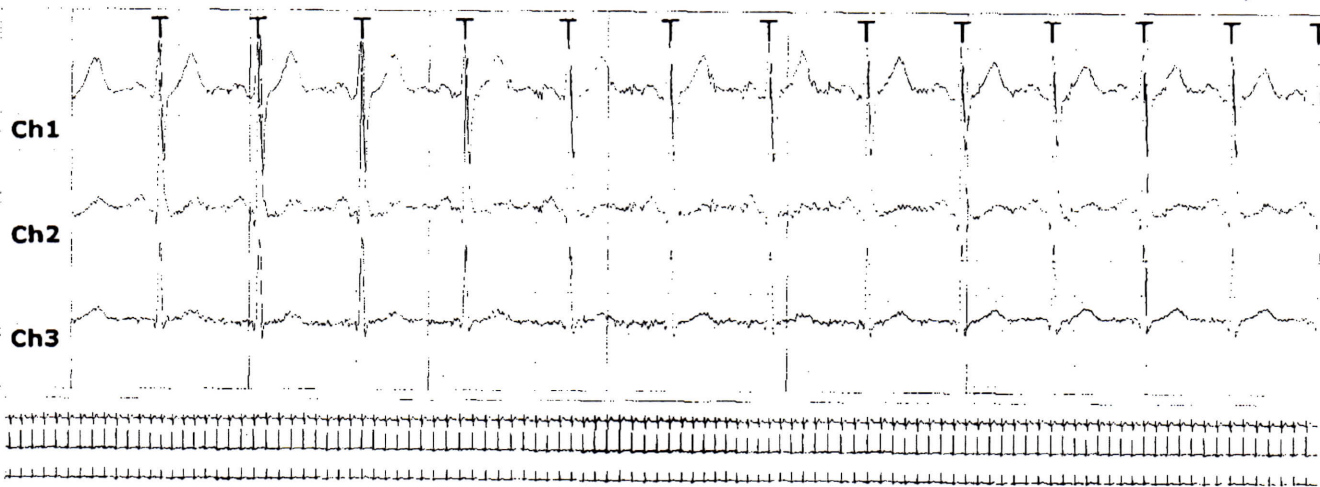
2:31:52 PM 111 BPM Size x1,x1,x1 Tachy

Strip 8 of 12



3:20:31 PM 119 BPM Size x1,x1,x1 Tachy

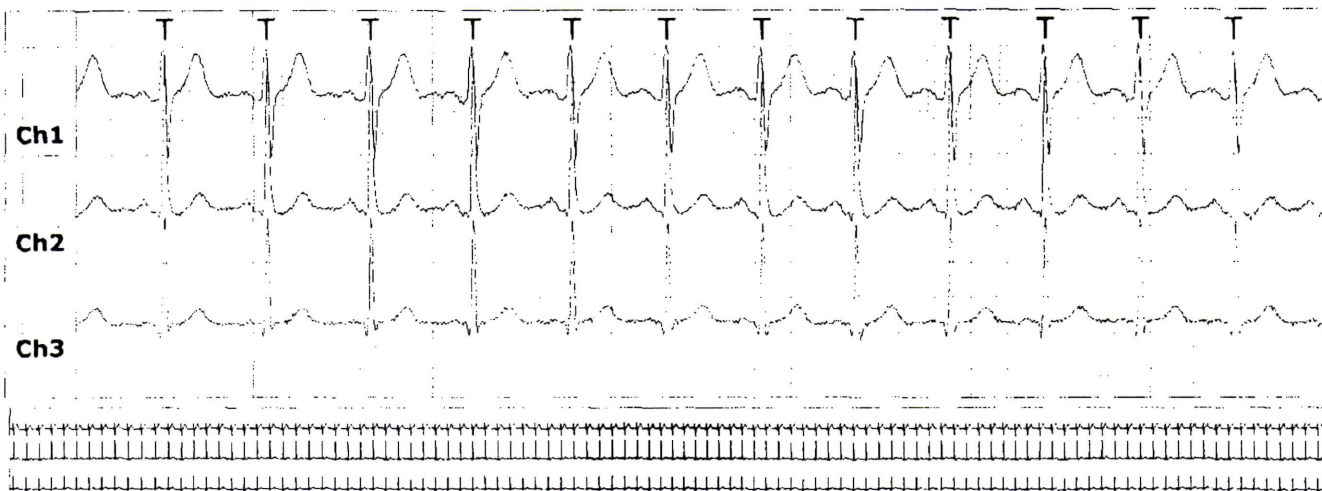
Strip 9 of 12



SELECTED STRIPS

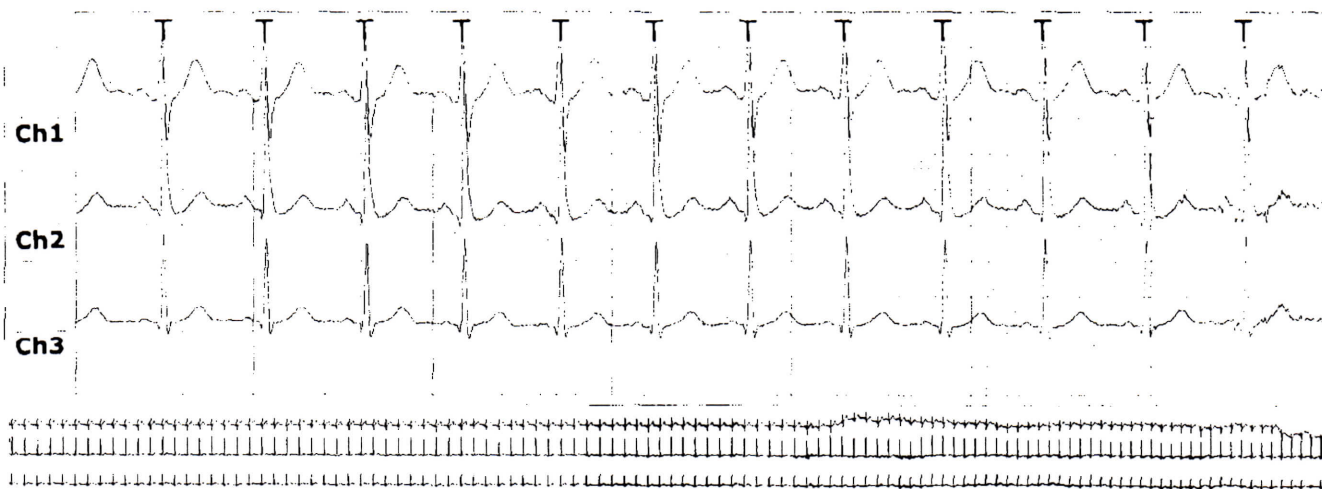
4:12:10 PM 112 BPM Size x1,x1,x1 Tachy

Strip 10 of 12



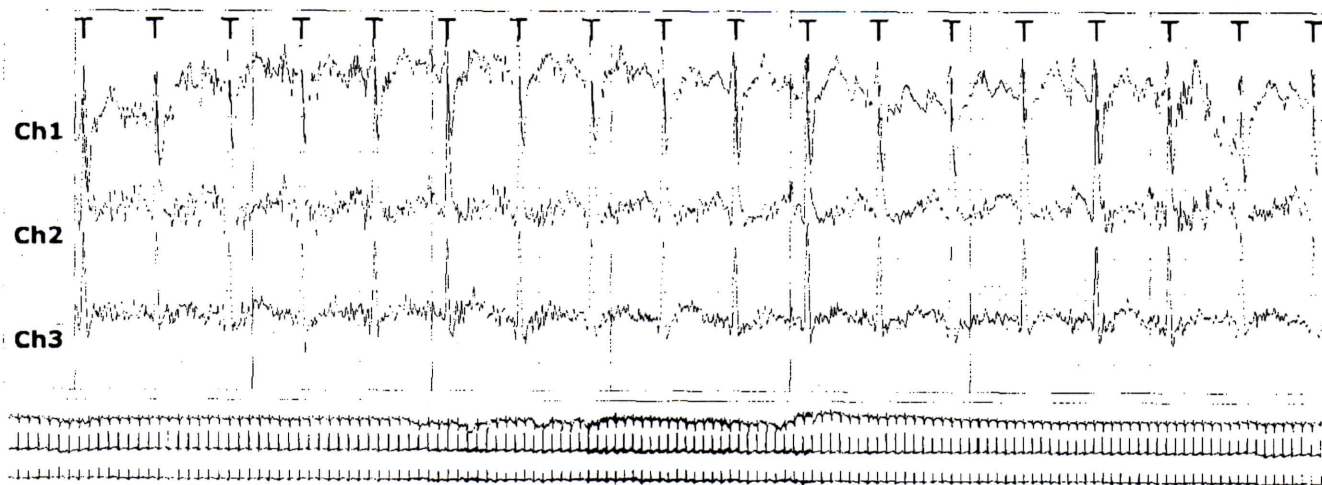
4:52:27 PM 145 BPM Size x1,x1,x1 Tachy

Strip 11 of 12



4:56:28 PM 150 BPM Size x1,x1,x1 Max HR

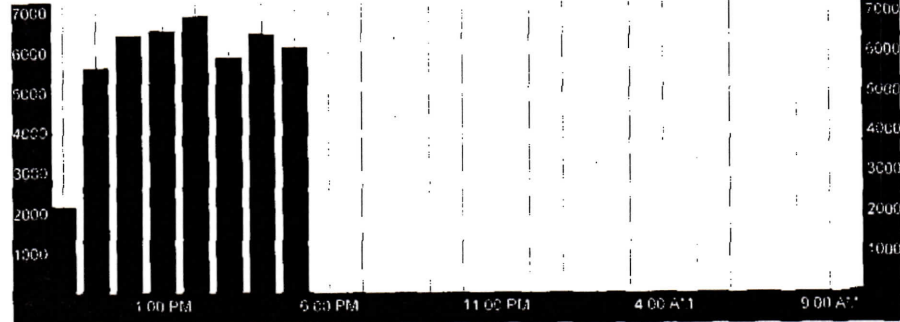
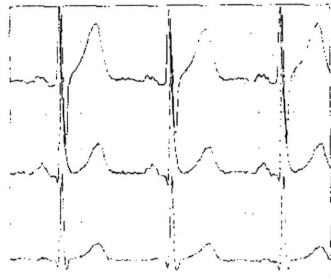
Strip 12 of 12



MORPHOLOGY REVIEW

9:40:06 AM Primary Normal 46190 Beats - BPM

Strip 1 of 1



GLOSSARY**Beat Annotations**

Annotation	Sample Color	Beat Classification
2	Red	Ventricular Bigeminy
C	Red	Couplet
I	Red	Interpolated PVC
P	Red	PVC
L	Red	Late Ventricular Ectopic
E	Red	Non-premature Ventricular Ectopic
R	Red	R on T
3	Red	Ventricular Trigeminy
T	Red	Triplet
V	Red	Ventricular Run
2	Yellow	Atrial Bigeminy
C	Yellow	Atrial Pair
F	Yellow	Atrial Fibrillation
A	Yellow	Atrial Run
3	Yellow	Atrial Trigeminy
B	Yellow	Bradycardia
D	Yellow	Dropped Beat
L	Yellow	Late Beat
P	Yellow	Premature Atrial Contraction
T	White	Tachycardia
N	White	Normal
n	Gray	Unqualified Normal
v	Gray	Unqualified Ventricular
*	White	Noise
?	White	Artifact
-	White	Bad Gap